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CLASSIFICATION AND DEVELOPMENT OF PRIMITIVE IMPLEMENTS

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The various ancient remains of man throughout the world have been so divided and subdivided by archeologists as to present great difficulties when we attempt to study them chronologically. The whole theory of the distinction between the Paleolithic and the Neolithic periods, as the words themselves signify, is the ancient from the recent in the stone period. Is there sufficient evidence to sustain any such mechanical difference among the races of the world? By the majority it is contended there is an abundance of such evidence; the writer contends the contrary.

The only rational hypothesis on which a Paleolithic period may be sustained is that paleolithic implements are complete implements in themselves. If, on the contrary, they are not finished articles, the argument in favor of such a period utterly fails. Whether they are or are not implements has given rise to great diversity of opinion, and the discussion for and against has at times been quite heated.

This question has been discussed but little from a technological point of view, which is remarkable when we consider that the matter relates to the uses to which implements have been put by primitive man and to the means by which they were made. There are few persons who have attempted to work with primitive tools and there are probably even fewer who have tried to produce them by primitive methods. The writer has demonstrated how some of the neolithic or polished implements were

made, and has experimented sufficiently in chipping different stones to be able to say in what manner much of this chipping was done, and to demonstrate that unusual expertness and skill were requisite in order to shape many of the so-called paleoliths. With the average neolith little time was required to complete it and but little skill was needed, for the tools with which the work was done were most primitive. With the paleolith, on the other hand, but little time would be required to complete it, but the tools necessary were complex and much skill was required not only intelligently to chip the stone, but yet more so to select a proper stone for chipping.

Imperfect knowledge of the lines of fracture of stones has led archeologists to describe as implements certain objects which, were they found in America, would be considered as unfinished implements or raw material. The so-called "cache tool" or lanceolate stones, commonly found in great numbers in a single place, was probably stock material carried from the original source of supply in that shape in which it could best be transported for subsequent specialization into implements. It is not meant to deny that implements or objects of this character would never be employed as tools for any suitable work, but it is suggested that they were not as suitable as were other implements for any work for which they could be employed. In the effort to produce the cache-tool type many failures resulted, as is evidenced in the great quarries at Washington city and at Flint ridge, Missouri, as well as in every other place of original supply in the whole country.

Owing to the differences in shape of these "cache" implements when compared one with another, and to similar differences in many cave implements from the continent of Europe, and the common European drift type of implement, yet the wonderful similarity in general shape and finish among the whole lot, whether from Europe or America, many specialists insist on seeing in them tools which they acknowledge are ruder than implements belonging to modern stone-age peoples, and argue that the rudeness of these objects is in itself evidence of an inferior mechanical skill in those who made them when compared with peoples of a later period. These views the writer has combatted and contends that the differences of shape in these implements are due primarily to structural differences in the fracture of mate-

rial rather than to the mechanical ability of the one who did the fracturing. The angle of cleavage of a stone when artificially chipped or flaked varies considerably and must not be confounded with its cleavage, taken in the ordinary mineralogical sense. Flint, rhyolite, jasper, obsidian, and quartzite vary greatly in their fracture in the same ledge a few feet apart.

Much of the present theory of the existence of paleolithic man as now understood appears to depend on the proper solution of these views. If the "paleolith," as a tool, does not represent a specific mechanical status, then it represents nothing. The shape of this style of implement remained unchanged through eons of time, we are told, because man continued to imitate a most primitive shape of tool. Let us look into primitive conditions and see if we may substantiate this view or if we must abandon it as untenable.

Naturally man's condition will be influenced largely by his surroundings; climatic changes, differences of food-supply, the character of his neighbors, whether man or beast, and the supply of raw material to fill his wants—all would have their influence. Such differences, however, will be found not to have caused any variation in the simpler implements which, wherever found on the earth's surface, include knives with which to cut, hammers to bruise or break, abraders to smooth rough surfaces, clubs for defense, thongs with which to tie, piercers with which to make holes, pigments for coloring, vessels to hold things, and covering used as clothes or for ornament. The very marked similarity in all these objects on the different continents is reasonably conclusive that they were made and employed for similar purposes and because there was an insufficient natural supply to satisfy the demand.

All research indicates indisputably that the most primitive peoples of whom we have any knowledge not only made use of the bountiful supplies of nature, but that they improved these natural supplies by shaping objects to suit their taste. From the very nature of things, primitive races could not have had any great variety of implements, for, having no knowledge of agriculture, they were restricted to the food supplies spontaneously furnished in the particular locality where they wandered. Fruits, nuts, mammals, birds, fishes—in fact, everything on which man feeds—vary with the seasons. In localities where supplies

were constant, increase of population would necessitate migration, and where there were seasonal changes man would of necessity be a wanderer. As the fruits ripened in one place or in the other, as game came and went, as the products of the water were scarce or bountiful, as the water was warm or frozen, man would of necessity move from place to place.

A classification of implements demonstrates the wonderful alterations which have taken place in the mechanical skill of the human race since its most primitive stage. Implements have varied enormously, yet the most careful scrutiny suggests that the improvements do not follow those lines which many have hitherto supposed. Archeologists have thought to see in the different implements a gradual upward tendency from an extremely rude beginning, thus showing evolution in the tool itself, apparently ignoring the fact that tools have varied but slightly from their natural shape. As bronze and iron were respectively discovered, however, alterations would naturally suggest differences to those employing these metals.

The many names given to the supposed different periods of man's occupancy of the earth have been of a uniform growth, keeping pace approximately with new discoveries of man's dwellings, a few only of the more striking of which will be referred to.

Wilson in his *Prehistoric Annals of Scotland* first employed the word prehistoric. Goguet first offered evidence of a Copper age in 1758. It was Thomsen, the founder of the great Museum of Copenhagen, who divided the ages of man into those of stone, bronze, and iron, thus providing a basis of scientific chronology. After Boucher de Perthes made his now famous discoveries in the valley of the Somme of the bones of an extinct fauna associated with the implements of early man and lying side by side in what has been claimed to be undisturbed gravel, Sir John Lubbock suggested the term "neolithic" to distinguish the supposed polished stone from the "paleolithic" or chipped-stone period made known by the discoveries of M. de Perthes. Implements claimed by many to be similar to the flints of the European drift have been found in certain American localities, which are asserted by some of the best known American geologists to belong to the talus of certain streams rather than to undisturbed gravel. Lartet divides the prehistoric periods according to the frequency

of finding the bones of the fauna of the later Quaternary mammalia. The correctness of his chronological order of disappearance of animals has, however, been combatted by certain English geologists. Cartailhac divides the life history of primitive man into upper and lower Tertiary and upper and lower Quaternary and identifies these periods by supposed climatic differences as well as by the disappearance of the fauna, as suggested by Lartet.

Mr J. Allen Brown suggests a new arrangement of primitive periods: I. Eolithic; the rough hewn pebbles of the Chalk plateau. II. Paleolithic; higher drift; oldest breccia. III. Mesolithic; between Paleolithic and Neolithic. IV. Neolithic; polished.

M. Gabriel de Mortillet classifies these periods into the same as Mr J. Allen Brown, omitting the Mesolithic, yet he subdivides the Eolithic into two periods and the Paleolithic into five, leaving the Neolithic alone and making four more recent periods to include the second Lacustrian.

To M. Adrien de Mortillet appears to be due the credit of first making a classification of prehistoric tools according to their purposes—I. Cutting tools; II. Rasping tools; III. Striking and crushing tools; IV. Perforating tools—all of which are subdivided according to whether they work by a blow, by friction, or by pressure, and are further subdivided by specialization, in which the scissors, shears, and drawing-knife are included under number I, the rasp and file under number II, mills under number III, and gimlets and augers under class IV, which are hardly to be included under pure stone-age conditions. I would take exception also to the distinction between pressure and friction, and say that all primitive tools are made primarily by pressure or by blow until man learned to employ fire and heat and cold in tool-making.

This classification appears to have been adopted by Professor W. H. Holmes, but elaborated by subdividing according to the work performed by the respective tools. Professor McGee, in referring to Holmes' classification, suggests that in the shaping arts the fracturing process began with lowest savagery and culminated in highest savagery, declining through barbarism and civilization; that the battering process (class II) began toward middle savagery, culminated in barbarism, and then declined; the incising process (class III) began in savagery, increased slowly

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through barbarism, and continued to the present; that the abrading process (class ?) began in middle savagery and feebly increased through the cultural stages. To these views of Messrs Holmes and McGee, Dr Brinton took exception as being a departure from European views. To this Professor McGee said the views were based on American phenomena, which were different from the European.

The writer must dissent from the views of Messrs McGee and Holmes as not being sustained by American phenomena and even less by that of Europe, for with scarcely an exception the arts have improved from the beginning. As to differing with European views, that should not signify in the slightest, one way or the other, and it is submitted that deferring to the views of a class or school can have no other effect than, as has occurred in America, the blind following of Europeans, there being no reason why Europeans should not err as well as Americans in determining primitive tool uses.

In many instances the supposed differences in the art of flint-chipping has been the distinguishing feature of implements, by means of which the periods to which they belonged could be determined. The names of these periods have been so subdivided by European archeologists as to give rise to inextricable confusion in any effort to place them in chronologic order. One of the most distinguished of European scholars has suggested that all be called the Paleolithic, and until this suggestion is adopted the confusion will continue to increase.

That the fracture of stone implements is due entirely to the character of the stone worked may be demonstrated by any one who will, with an ordinary hammer, pass two or three days in fracturing different stones and in trying to fashion them into particular shapes. Only a few years ago European writers invariably spoke of the inferiority of American chipped implements, when compared with similar European specimens, as being evidence of the low stage of mechanical skill of the American Indian in precolumbian times, but when arrowheads from California, Oregon, and New Mexico were shown it was admitted that the western American was an expert in the use of the flaking tool, thus demonstrating that perfection of chipping or flaking depends absolutely on the homogeneity of the material worked.

Classification and Development of Primitive Implements

Natural material.	*Natural function.*	*Primitive tool.*	*Special tools.*	*Complex tools.*
Stone, Wood, Shell, Bone	To crush	Hammer, Sledge		
Stone, Shell, Bone, Wood	To cut	Saw, Knife	Scraper, Chisel, Gouge	Ax, Hatchet, Hand grips, soft, Solid handles
Sand, Stone, Wood, Shell, Skin, Bone	To abrade	Sand, Grit	Coral, Skin	Stone of varying hardness, used with sand and water, Bone, Fish skin, Gritty woods
Pigments	To color	Dye, Paint	Feathers	
Wood, Vines, Shell, Bone or horn, Skin	To lift or strike	Club, Lever	Wedge, Lance	Ornamental handles
Wood, Vines, Skin	To bind	Thong, Withe	Intestine, Sinew	Grass (platted, bound, or twisted), Pounded vegetal fiber, Strips of hide, Hair
Stone, Shell, Wood, Bone or horn, Skin	To contain	Bowl, Bag	Raft	Reeds bound together, Gourds, Bladders
Stone, Wood, Bone or horn, Shell	To pierce	Pin, Awl	Bodkin	Needle, Drill, Lathe
Wood, Shell, Stone, Skin	To cover	Skin, Ornament		Skins dyed and colored, Bark and feathers bound together, Tanning

Results of Primitive Methods

Handles held by grooves and holes cut into the stones.
Handles bound on by strings.
Handles grown on implements.
Handles held by dowels.
Handles held by wedges.
Handles by gum and gluing.
Swelling of wedges to crack stones.

Arrow, spear, lance, dagger, and flaker are hafted.
The weight to shaft produces the digging stick.
Strings made into nets.
The house, tent, bedding, basket.
Boats of hollow logs, of bark, of skin.
Pots, pans.

The classification here submitted is believed to cover the most primitive period of man as a tool-maker throughout the age of stone in all countries.

Articles which in their natural state may be employed as tools do not appear to have been properly considered in regard to the influence they would have in governing the shape of primitive implements, nor do the physical actions of nature in adding to the tool-supply appear to have been studied in investigating the development of the implements of prehistoric man. Animals, the stones from water-courses, the minerals formed on the ledges of hills, shell from the seashores, and canes and other vegetal growths, all supplied the most primitive races with implements. Ivory, horn, bone, skin, water-worn pebbles, spalls broken from larger stones by frost or heat (with their sharp points or edges), shells, wood shaped by fire or decay, even the sand beds, cocoanuts, gourds, and vines furnished natural implements in almost endless variety.

The earliest trace of man acquaints us with him not only as a tool-user, but as a tool-maker, who shaped stones by chipping them, who scraped bone, ivory, and horn into forms to suit his convenience, even to the extent of perforating and carving them in imitation of men and beasts and fishes; he added to the natural supply of his particular neighborhood; he imitated the natural results of stone rubbing against stone in running streams and knew how a blow from a stone would affect other stones by shattering into spalls similar to those which occasionally would be derived from the effects of frost or fire.

Many travelers have referred to the implements employed by primitive races living in the lowest stages of savagery, and almost without exception it is found that the rudest people in mechanical development have made the best uses of the natural productions of their particular locality. Among these are found stones to hurl, hammers with which to strike, deer-horn and fish bone piercers, the spurs of birds and splinters of stone or bone for arrowheads where bows are used, and thorns and splinters for pins and needles; split canes, shells, and spalls of stone furnished knives; the limbs of trees supplied clubs and levers, and shark teeth and shells were used as saws and razors; sand and coral were the grinding stones, and smooth pebbles were used as polishers; turtle-shells, shellfish, and cocoanuts provided drinking vessels, and even shields; bladders and gourds supplied receptacles, and skins of animals or bundles of reeds furnished the means of crossing deep streams; vines, entrails, and the tendons of animals were used as cords for different purposes; the skins of beasts and of birds answered where needed as clothing; pigments were employed for coloring, and feathers and shells for ornamentation. These were some of the things employed by man of the earliest stone age.

This classification is not supposed to be perfect, but is believed to cover stone-age conditions in material and process and is offered for criticism, which cannot fail to aid the systematic study of the technology of archeology, which should agree as to the development of tools in Europe, in America, or elsewhere. No matter what argument is advanced as to the mechanical development of the people of the earliest periods, it cannot be successfully denied that those who made the familiar tools and carvings of the caves and who cut and ground the bone and ivory ornaments and made the whistles and other objects from bone and antler, and whom it is now acknowledged made and burned pottery (as the so-called paleolithic man of Europe did, though by some this was long denied), they were in mechanical skill or culture development practically the same man as he of the polished-stone period, for he had necessarily to perform similar work. It will not do to claim that American archeologists because of their want of familiarity with European conditions are incompetent to judge of the accuracy of the paleolithic theory. There are few museums not possessing types of the European

paleoliths, to say nothing of the American chipped stones called paleoliths and admitted to represent similar conditions. The eminent ethnologist, Major Powell, has well expressed the fact that "the mind of man is everywhere the same; the differences of its products are evidences of differences of growth or different conditions of environment." The danger to be apprehended from the paleolithic theory is well evidenced by the flints of Cissbury, in England, and Spiennes, in Belgium, and even the cave-finds of Europe have been criticised by an eminent European archeologist, who has asserted that had they come from near the surface in England they would have been considered neolithic.

If man of the Paleolithic period had taken the stone from which Neolithic man struck long thin flakes and broken it, he would of necessity have broken off such flakes, and just as certainly had Neolithic man tried to improve on the obsidian spear-points of the Easter islander—implements than which none are more rude—he would have ignominiously failed. He would further have found that even to imitate the Easter island implement he would have to break all the spalls from one side of the stone or destroy the specimen because of its peculiar fracture. Was Paleolithic man never in a position where he need break the indurated clays or metamorphic rocks? If he was, he surely could chip but very few, if any, of them.

To summarize, it may be said that primitive life has been everywhere similar and that primitive implements are alike, as are the needs of savage people. This is emphasized in the known similarity in implements the world over. Wherever we find traces of man, there we find his tools; we find the natural supply has been employed and that they were produced by blow or pressure from stone, vegetal products, and animal remains.

Dr George A. Dorsey, who has been an instructor at the Peabody Museum during the last five years, has accepted a call to the Field Columbian Museum of Chicago, to take the position of assistant curator in the department of anthropology. He will be in full charge of physical anthropology at that institution. Mr Frank Russell, of the graduate school of Harvard, has been appointed assistant in anthropology to take Dr Dorsey's place as instructor in Anthropology for next year.—*Harvard Crimson.*

THE UTE BEAR DANCE

VERNER Z. REED

In March, 1893, I attended and participated in the annual Bear dance of the Ute Indians, held on this occasion by the Southern Ute tribe on their reservation in Colorado. Owing to an intimate personal friendship with the war chief and several other prominent members of the tribe, I was enabled, by dint of much patience and perseverance, to meet with some success in making a study of the dance. I do not believe that any white person has studied it before, and while it is quite probable that all the mysteries of the dance were not explained to me, I believe that the knowledge gained will be of interest to students of Indian life. So far as I could learn, there is no tradition antedating the dance itself on which the ceremonies are founded, and I believe the Bear dance to be one of the oldest of all the Ute ceremonies. Traditions are mingled with it, are the life of it, but the Indians believe the dance to be as old as the traditions themselves.

In all the picturesque West there is probably nothing more picturesque than the sacred Bear dance of the Ute. The one I attended was held in the valley of the Rio de los Pinos, a beautiful little tributary valley of the great San Juan, with the mighty panorama of the towering La Plata mountains always in view. Groups of tents were scattered over a distance of a mile or more. Far away over the mesas could be seen the caravans, groups and individual Indians, coming to the camp to participate in the dance. An inclosure of evergreen boughs was erected near some tall cottonwood trees, and everywhere were Indians dressed in their best and on their best behavior, gathered together from the ends of the reservation for the purpose of assisting in the ceremonies.

Although their reservations are being encroached on by the settlements of the whites, the Ute Indians have scarcely been touched by civilizing influences, and they adhere to the traditions and beliefs of their fathers in the days before they were hemmed in by Anglo-Saxon boundary lines of progress. To them Nature is the all-providing mother, and their ceremonies are founded on the evidences of nature as they see them. A

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vivid imagination has often crowned or distorted nature, but through all their rites there runs an adoration of natural phenomena. They have seen the eagle in his eyries preying on and mastering all other birds, and they regard the eagle as being king and chief of the feathered kind. They have seen the mountain lion assert his supremacy over all other animals, and to them he is king of beasts. They have, in their way, traced the laws of nature in either direction to birth or death, and there they leave fact and enter the realm of superstition, as many wiser nations have done.

The Utes believe that their primal ancestors were bears; after these came a race of Indians, who, on dying, were changed to bears, and as bears they roamed in the forests and mountains until they died, when they went to the future land and lived with the shades, preserving the forms of bears, but having human wisdom and participating with the Indians in the pleasures of immortality. It is believed that this transmigration ceased long ago, but the bears of the present are believed to be descendants of the Ute bears of old, and are therefore related to the Indians. Bear worship, in one form or another, tinges many of their ceremonies. They regard the bear as the wisest of animals and the bravest of all except the mountain lion. They believe that bears possess wonderful magic power; that they can convey intelligence over long distances by means of *po-o-kan-te*, or magic. They believe that the bears are fully cognizant of the relationship existing between themselves and the Utes, and their ceremony of the Bear dance, being a form of animal worship, assists in strengthening this friendship. As the Utes consider that they are a higher order of beings than the bears, one of the purposes of the dance is to assist the bears to recover from hibernation, to find food, to choose mates, and to cast the film of blindness from their eyes. Some of the other motives of the ceremonies are to charm the dancers from danger of death from bears, to enable the Indians to send messages to their dead friends who dwell in the land of immortality, and one or two minor ceremonies are performed usually for the purpose of healing certain forms of sickness.

The Bear dance is always held in the month of March, that being the time when the bears recover from hibernation. In former times the dance was more exactingly observed than it

Drawn by Charles Craig

THE UTE BEAR DANCE

Photo by Dinwiddie

now is, and a dance was often held annually by each one of the Ute tribes. Of late years, however, a dance given by any one of the main tribes is deemed sufficient.

The dance is always given under the direction of some one person, usually a medicine man or chief, although he may have any number of semiofficial assistants. Sometimes two or three months are consumed in making the necessary preparations. After the annual winter hunt is over, when the time grows dull and the people listless from inaction, a man goes to the proper functionary and asks him to appoint the time for a Bear dance. The language of the Utes is simple, and like most simple languages, possesses an element of poesy. The following, almost verbatim, is the language used by a Southern Ute in requesting a chief to arrange for a dance:

"Chief, it has been long since our people have all been in one place, and it would be good for us all to be together again. The times have been good with us; our children have been stricken with no diseases; we have had no wars in which our men have been killed; we had much good fortune in our hunts, and we have plenty of food for a feast. The bears are our friends; the time has come for them to be awakened from the long sleep of winter. We have good friends above; it would be well to send messages to them to let them know that we of the earth still love them and remember them. Let us, then, give a Bear dance."

If the chief agrees, messages are sent to the makers of songs, the gossip of the tribe for the last year is reviewed, and the more amusing and choicest portions are incorporated into songs set to simple tunes and practiced. Songs of worship and incantations to the bears and shades of the dead are also composed, but the songs of lighter character prevail. The squaws hew *moraches* or "singing-sticks" out of wood to be used during the dance ceremonies. These sticks are shaped like the jaw of an animal, and teeth-like protuberances are left over which to grate bones or sticks of wood.

One of the first duties performed is to select the site for the dance. The one I attended was held on a slight elevation. Men are then detailed to go to the forests and bring in timbers and pine boughs with which to make the inclosure in which the dance is held. This inclosure is named *a-vik-wok-et*, or "cave of sticks." It is from 100 to 150 feet in diameter, is circular, and

Photo by Dinwiddie
THE UTE BEAR DANCE
Drawn by Charles Craig

is meant to represent a bear cave. It has one opening, always to the south or southeast, facing the sun, as the bears in choosing their winter quarters are said to select caves into the mouth of which the sun shines a part of the day. The walls of the inclosure are about seven feet high; there is no roof, and no floor save the ground. On one side a location is selected for the stand of the musicians and a hole somewhat of the shape of a water-jar is dug in the soil. First a circular hole is made and then the Indians reach under and scoop out the earth with their hands, in semblance of an underground cave. Over the hole a box or drum with an open bottom is placed, the hole augmenting the sound that is made when the *moraches* are grated. The *moraches* are placed with one end on the lap of the player and the other end against the box. Up and down them bones or pieces of timber are rubbed, making a noise that at a short distance sounds like the beating of a pair of muffled cymbals.

When the preparations for the dance are well under way the chief sends out a courier to announce the ceremony to the tribe. The tribes are divided into small bands of from five to ten families each. The courier rides to the encampment of one of these bands, delivers his message, eats, smokes, and returns to his own encampment, and the head man of the band selects one of his men to carry the announcement to the next band, and so on until all have been given notice.

The Indians believe that the immortal bears and Indians who dwell in the Land Beyond are cognizant of the preparations that are being made for a dance, and that they also prepare for a spirit Bear dance. It is believed, too, that the spirit bears send some of their number to earth to whisper to the sleeping bears and tell them that they are soon to be freed from the long sleep of winter.

The ground within the *a-vik-wok-et* is sacred during the days of the dance and no dogs or horses are allowed on it. To keep animals out, to preserve order, and to enliven the spirit of the dancers, there are two managers of the dance, called *ma-choot-a-po-get-ah*. All who come within the inclosure while dancing is going on must dance, if requested and any woman has a right to choose any man as a partner.

There are always twenty or more musicians who have been specially drilled for these ceremonies, as well as other men who

join in when old or familiar songs are sung. The singers are always men; they are the first to arrive at the dance inclosure on the day of beginning, and from eight to fourteen of them sing and rub their notched timbers constantly during the dancing.

When the music begins, the noise sounds in the little cave-like hole under the drum, and a song of incantation is sung that is believed to transport this noise to the caves of the bears in the mountains and to transform it to thunder. It is believed that this thunder arouses the bears slightly, but that they are sluggish from the long hibernation and do not become fully awake at first. On this account the dancing lasts but an hour or two the first day.

The female bear chooses her mate, and in the dance the women choose their partners. When a woman desires to dance with a man, she approaches him and plucks his blanket, and then sedately takes her position in line with the other women and awaits his coming. The women form in one line, the men in another, the two lines facing each other. At first the participants in each line hold hands, but as the days pass the enthusiasm increases and each couple dances independently. When the proper bar in the music has been struck, the women take three forward, springing steps toward the men; they then reverse and take three backward steps, and as they go backward the men go forward in the same fashion, motioning with their arms in imitation of the motions made by the forepaws of bears. When the men have gone three steps forward, they reverse and go backward and the women go forward again. This is the only figure in the dance, but it may be varied in numerous ways by dancers who strive to show their skill. Often a couple will dance with their arms about each other, imitating the "hugging" of bears, but there are always the monotonous three steps.

While the dance is in progress no gambling, and but little work, is permitted. All except the smallest children dance; some, no doubt, chiefly for the social pleasure, of which there is little enough in their narrow lives, others to perfect themselves in magic, to send messages to their departed friends, and to charm their lives against danger from bears. It is believed that the bears are cognizant of who participate in the dance and will harm no one of the dancers for a year afterward.

It is an evil omen for a dancer to fall, but this "bad medi-

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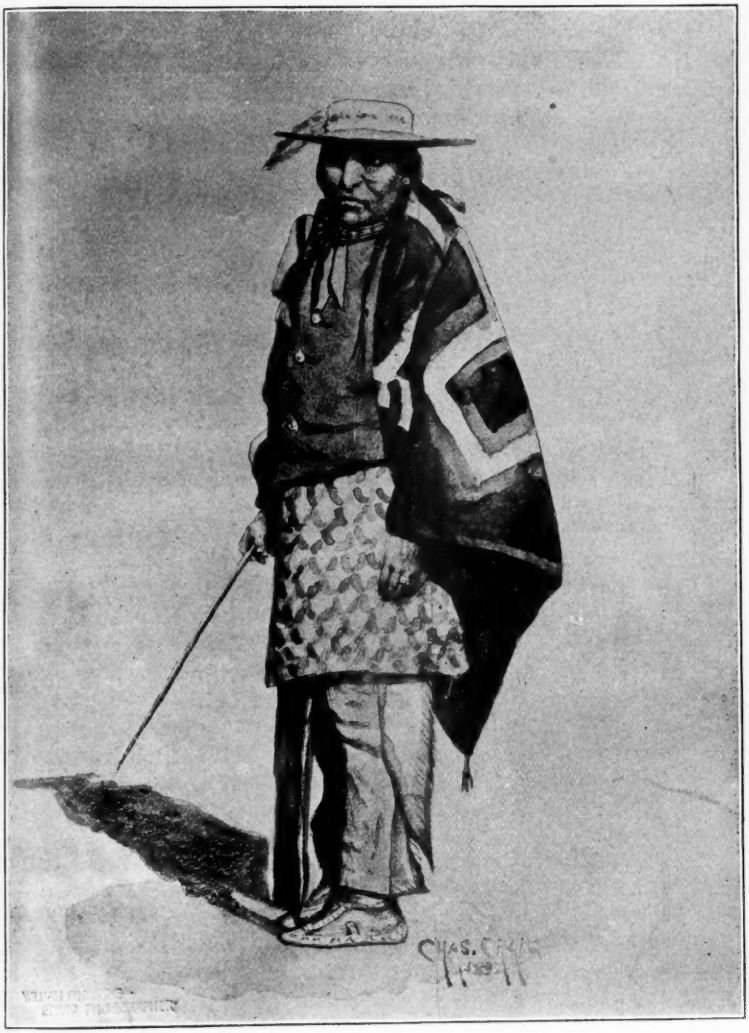
cine" can be exorcised if a medicine man will approach the fallen one and with a *morach* and stick make a motion toward the dancer's feet and then toward the sky, and repeat this by making similar motions toward the knees, the back, and the head. The passes toward these parts are supposed to impart strength; that toward the sky carries the intelligence to the shades and bears that the unlucky dancer has been charmed and is to be spared if met in the hunts. If a dancer falls, the music instantly stops, the set is not finished, and the fallen dancer strictly maintains his position until he is "doctored." Each dance-set lasts about ten minutes, and at its conclusion the men and women retire to different sides of the inclosure. If a woman should step on a man's foot during the dance, it is a sign that the two will become enamored, and such missteps are greeted with great shouts of laughter by the dancers and spectators.

The duration of the dance—four days and one night—is fixed by the time required by bears to recover from hibernation. On the second day the bears become quite wakeful and their powers begin to return to them; therefore on the second day of the dance there is much more festivity than on the first. It is believed that the bears leave their caves toward the close of the second day of the dance, and that the female bears begin dancing to trees. On the third day it is believed that the bears have mated (after preliminary dancing), and that they wander in the forests seeking food; so on the third day the Indians dance from early morning till sundown with little cessation. The night of the third day is the time of the night dance, as it is believed that the bears, driven by hunger, wander all night long in search of food. After a short rest and a supper at sunset, the Indians begin the closing part of the dance, believing that the bears might perish if the dance did not go on ceaselessly. Heaps of dry branches are brought into the inclosure and lighted, the fires being replenished from time to time; all the musicians and dancers are on hand, and by the firelight the dance goes on without ceasing. The men and women dance until compelled by sheer exhaustion to desist, but they continue so soon as they have rested a little. Whenever a dancer is forced by fatigue to drop out of line his place is taken by another, and some sets are dancing almost constantly from the beginning of the night dance until the end of the ceremony, which is at noon of the



A MANAGER OF THE BEAR DANCE

following day. No food is eaten during the eighteen hours of this closing ceremony, but at noon of the fourth day a great feast is spread, and the tired dancers have full privilege to eat all they wish. The spirit of this feast is believed to be wafted away, part to the beyond, where it provides a feast for the shades who have been dancing, and part to the forests, where it is believed to be eaten by the bears.

Several times during the progress of the dance messages are sent to the Land Beyond. One of the managers waves his staff for silence, and then a chief arises and announces the rite. The men stand in silence on one side of the inclosure, the women sit mutely on the other. Then a bunch of corn-husks for cigarettes, together with a bottle of tobacco, are handed to the leader of the musicians. He takes the husks and tobacco in his hand, reverently bows his head and repeats an incantation, and then rolls a cigarette, passing the husks and tobacco to another singer, who does the same. When each of the singers has rolled a cigarette, all heads are bowed again, there is a long moment of absolute silence, and then the words of an incantation are repeated in chorus by all the singers. It is believed that the words of the incantation are heard in the sky, and that the shades there know that messages are to be sent to them from some of their mortal brothers. After this incantation the cigarettes are lighted and a few puffs blown toward the sky, it being believed that the smoke ascends and provides a smoke of friendship with the shades. Then the particular messages are spoken, the speaker bowing his head as he talks, and all the others maintaining the most rigid silence and not moving in their places. The Indians believe that any one can, with the aid of the incantations and the sacred smoke, send messages to the sky, but that answers can be heard only by medicine men.

Two or three times during the continuance of the dance, but never until after the first day has passed, a handsomely beaded medicine pipe, filled with dried kinikinik leaves, is brought into the inclosure, lighted, and passed from one man to another, each taking two or three puffs, rubbing his fingers over the stem of the pipe, as though it were a flute, and then handing it to the man next to him. This ceremony is to show affection for the shades by providing them with a similar smoke, and is an important medical ceremony as well, for it is believed that it pro-

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tects the smokers from pneumonia and consumption. The women take no active part in either of the smoking ceremonies, but are rapt observers.

When the feast of the fourth day is concluded, all the ceremonies of the dance are over, and it is believed that the bears have fully regained the use of all their faculties, have found mates, have been provided with food, and that they will gratefully remember their Indian relatives and repay them by assisting them in the practice of magic.

The Bear dance is more of a social affair than any of the other Ute ceremonies except the Tea dance. While the Bear dance is in progress much courting is shyly done among the young people, and after the conclusion of the dance ceremonies there is a period of feasting and merrymaking. Several of the younger couples may be married according to the very simple Ute ceremony; families will visit with friends whom they may not have seen for a year; a few horse races and foot races will be arranged, and in sunny spots men and women will congregate, blankets will be spread on the ground, and belongings will be hazarded in the Mexican game of monte or in the native game of *kan-yu-te*. Some traffic may be done in horses, blankets, skins, and beadwork, and a council may be held by the chiefs and older men; but within a day or two the big assembly will begin to disband; in pairs and groups the Indians will depart; within a few days the big camp will be deserted, the people will be scattered to the four quarters of their reservation, and in the minds of men who are hunting and women who are tanning hides or cooking food will linger pleasant memories of the jollity, the music, the songs, the love-making, the good fellowship, the worship, and the sacred duties pleasantly performed that helped to make up the great sacred Dance of the Bears.

JOHN GREGORY BOURKE

Captain John Gregory Bourke, who died at the Polyclinic Hospital, Philadelphia, on June 8, was born at Philadelphia in 1843. When nineteen years of age he entered company E and afterward company D of the famous Fifteenth Pennsylvania Cavalry, in the Department of the Cumberland, as a private, serving from August 12, 1862, to July 6, 1865, when he was honorably mustered out, later being awarded a medal of honor for gallantry at the battle of Stone river, Tennessee, in December, 1862. On the recommendation of General George H. Thomas he was appointed a cadet in the United States Military Academy October 17, 1865, and was graduated June 15, 1869, becoming second lieutenant, Third U. S. Cavalry.

He joined his regiment September 29, 1869, and served with it at Fort Craig, New Mexico, to February 19, 1870; at Camp Grant, Arizona, to July 21, 1870, and in the field in Arizona, operating against hostile Indians, to August 15, 1871, being engaged in action near Pinal creek, July, 1870. Was aide-de-camp to General Crook, August 15, 1871, to March 3, 1883; also acting assistant adjutant general of troops in the field during operations against hostile Indians in 1872 and 1873, being in action at the summit of Sierra Ancha, December 15, 1872; Salt River canyon, December 28, 1872; Superstition mountains, January 16, 1873, and with Tonto Apaches, February and March, 1873. In orders No. 14, headquarters Department of Arizona, April 9, 1873, he was specially mentioned for distinguished gallantry in these and other affairs, which resulted, on February 27, 1890, in the tendering by the Secretary of War of the brevet rank of captain for gallant services, which he however declined. Bourke's friendship and loyalty toward Crook during their ten years' association on the frontier were unbounded, and the famous general had unlimited confidence in his gallant aid. In the language of General Stanton, Bourke's courage and gallantry were bywords in the army, and his service ought to have had a greater reward. His copious notes were in constant demand by Crook, who often referred to them as to time and place of events in his campaign.

While still a second lieutenant, Bourke was acting engineer officer, Department of Arizona, July 1, 1873, to March 22, 1875;

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also acting assistant adjutant general of the same department, October 23, 1873, to June 9, 1874; was with the expedition to explore the Black Hills, Dakota, in June and July, 1875; was promoted to first lieutenant May 17, 1876; was acting assistant adjutant general of troops in the field on the Big Horn and Yellowstone and of the Powder river expeditions in Wyoming, May, 1876, to January, 1877, being engaged in the actions with Sioux Indians at Crazy Horse village, March 17; Tongue river, June 9; Rosebud, June 17; Slim Buttes, September 9, and Willow creek, Wyoming, November 25, 1876. For gallantry in the attack on the Indians on Powder river, March 17, 1876, and in the action on Rosebud creek, June 17 of the same year, Bourke was tendered the brevet rank of major on February 27, 1890, but this honor, like that previously earned, he declined. He participated in the campaign against Nez Percé Indians, September–November, 1877; was with Major Thornburgh's command in pursuit of hostile Cheyennes in the sand hills of Nebraska and Dakota, September and October, 1878; with the advance of General Merritt's command, marching to the rescue of Major Thornburgh's command on Milk river, Colorado, September, 1879, and on the Yellowstone expedition, August and September, 1880. He was promoted to captain on the 26th of June, 1882; acting assistant adjutant general of troops in the field operating against hostile Indians and on General Crook's expedition into the Sierra Madre, Mexico, in pursuit of hostile Apache Indians, April 6 to June 26, 1883; acting aide-de-camp to General Crook, March 24, 1884, to June 25, 1884; also acting assistant adjutant general, Department of Arizona, in the same year, and acting assistant inspector general of the same department, August 15, 1884, to June 25, 1885; with troop at Camp Rice, Texas, to September 18, 1885.

While Bourke became famous as an Indian fighter, his broad knowledge of the habits and customs and mode of thought of the red men fostered a sympathy for the American savage that prevented what many times might have proved the extermination of a predatory band. His intimate acquaintance with the inner life of the Indian was early recognized by the War Department. From December, 1880, to February, 1881, he was recorder of the Ponca Indian commission, and from April of the latter year until June, 1882, was assigned, under the orders of Lieutenant-General Sheridan, to the special duty of investigat-

ing the manners and customs of the Pueblo, Apache, and Navaho Indians. His work on the *Snake Dance of the Moquis of Arizona* was the outcome of a part of this research, and formed the first scientific contribution to that celebrated ceremony. After taking a prominent part in the surrender of Geronimo, the Apache renegade, and his band in the Canyon de los Embudos, Sonora, Mexico, March 26, 1886, Captain Bourke was ordered to Washington for the purpose of elaborating his voluminous notes obtained during many years of contact with the Indians, which work was continued until April, 1891. Not content with a mere collation of his material regarding the tribes with which he was most familiar, Bourke spent many months during his sojourn at the capital in its extensive libraries for the purpose of recording similar and parallel customs of other primitive peoples throughout the world, and the results of this research were greater than one could ever hope to publish during a lifetime. A suggestion of the completeness of this work may be gained from his *Medicine-men of the Apache*, in the ninth annual report of the Bureau of Ethnology, a paper which has been highly commended and widely quoted.

Captain Bourke's interest in the ordure rites of primitive peoples was first aroused at Zuñi in 1881, during a ceremony of the Néwekwe priests of that pueblo, and the results of his observations on that occasion were published in a pamphlet distributed among a limited number of students. A continuation of his researches along this line led to the publication of his noteworthy *Scatalogic Rites of all Nations*, Washington, 1891.

After rendering material aid to the Pan-American Congress, to which duty he was detailed by reason of his efficient knowledge of the Spanish language, Captain Bourke rejoined his regiment on April 9, 1891, and commanded his troop at Fort McIntosh, Texas, to May 14 of that year, and the troop and post at Fort Ringgold, Texas, being frequently in the field in the operations against Garza's band of marauders of the Rio Grande frontier, to March 3, 1893. This wary bandit was so closely pressed on one occasion by Bourke and his hardy troopers that his saddle and personal diary found their way to the National Museum, of which Bourke was a valued collaborator and a constant contributor. Among the many other collections in that institution bearing his name is the necklace of human fingers taken during the raid of the allied Sioux and Cheyenne in Wyoming and

Montana in the winter of 1876–'77, which resulted in the surrender of 4,500 hostiles at Red Cloud and Spotted Tail agencies in the early spring of the latter year.

During the World's Columbian Exposition Captain Bourke's knowledge of the Spanish language and of Spanish institutions was again called into requisition by his assignment to duty with the department of foreign affairs, in charge of the Convent of La Rabida. From November, 1893, to July 8, 1894, he commanded his troop at Fort Riley, Kansas, and was an active participant against the railroad rioters at Chicago in the autumn of 1894. He was ordered to Fort Ethan Allen, Vermont, his last post of active duty, in the autumn of that year, after having faithfully and bravely served his country in every quarter of its domain.

Captain Bourke was a frequent contributor to periodical scientific literature, particularly to the organs of the Anthropological Society of Washington, of which he was a councilor during his residence in Washington, and of the American Folklore Society, of which he was elected president in December last. The most frequently quoted of Captain Bourke's periodical contributions are: *Folklore concerning arrows; Vesper hours of the stone age; Primitive distillation among the Tarascoes; Distillation by early American Indians; The laws of Spain in their application to the American Indians; Notes on the cosmogony and theogony of the Mojave Indians; The gentile organization of the Apache Indians; The miracle play of the Rio Grande; The folk-foods of the Rio Grande Valley and of northern Mexico*, and *Popular medicine, customs, and superstitions of the Rio Grande.*

In addition to his connection with the societies above mentioned, Captain Bourke was a fellow of the American Association for the Advancement of Science, and a member of the Victoria Institute of Great Britain, and of the Congrès International des Américanistes. Captain Bourke's exceptional versatility, the product of a wide and varied experience, coupled with an extraordinary sense of humor and a wonderful power of expression, made him a most genial companion and gives even additional zest to his extra scientific productions, *An Apache Campaign, On the Border with Crook*, and *Mackenzie's last fight with the Cheyennes.*

In the death of John Gregory Bourke, Anthropology has lost an indefatigable investigator, American Literature a vivacious contributor, and the Army of the United States a courageous soldier.

F. W. Hodge.

BOOK REVIEWS

Bojagic Alile's Gluck und Grab, zwei moslemische Guslarenlieder von Dr Friedrich S. Krauss, in Wien, Herrn Dr Alfred Wiedemann gewidmet (Separat-Abdruck aus "Internationales Archiv für Ethnographie," Bd. ix, 1896). Leiden, E. J. Brill, 1896. 41 pp., 4°.

We have here one of the latest contributions from Dr Krauss, the distinguished ethnologist who has done so much to elucidate the interesting folklore and epic poetry of the southern Slavs. The work consists of two guslar songs—long heroic ballads sung to the accompaniment of the *gusla*, a peculiar instrument, half guitar, half violin. Like most of their kind, they deal with the long struggle between the Turk and the Christian, between European civilization and Asiatic barbarism, along the borderland of the Danube. The character of the struggle has ever been the same down to the present year of grace—wholesale pillage, murder, and massacre by the invading Turk, with as savage reprisal by the Christian whenever opportunity offered, and crowded thick with heroic deeds that rival those of Chevy Chase or the Black Douglas.

The two songs here given belong to the period of the beginning of the seventeenth century, the time when our own John Smith was cutting off the heads of Turkish champions in single combat in Hungary, while in every church throughout Christendom the prayer went up daily, "Lord, deliver us from the Turk." Unlike most of the guslar songs, these two ring the praises of Moslem heroes, being the production of that portion of the Slavic population which had been completely Moslemized by long years of Turkish rule.

In "Alile's Bridal March" a young Turkish chieftain, hearing of the beauty of Helen, the daughter of the commander of Karlstadt, a Croatian border town "manured knee-deep with human blood," collects a band of retainers and sets out to win her by fair means or force, as need may be. In spite of watchful guards, he finds means to enter the tower of the maiden, who falls in love with him at first sight, and by the connivance of the girl's mother, after one short day of happiness, they concert plans for flight across the border. Dreading the wrathful pursuit of

her father and his men, the young bride advises escape by night, but the lover rejects the proposition as cowardly—

> "Not so, my Helen, O my dearest maiden,
> 'Tis not by stealth that I would bear you with me,
> Rather by day and under the warm sunshine,
> So may you know your Alil is a hero."

They pass the guards, whose curiosity Alile stifles by a liberal distribution of gold, but have hardly rejoined their band, concealed in waiting outside, when they hear the boom of the alarm cannon upon the city walls and see the pursuing horsemen swarming through the gate. As the Croats come nearer, Alile's men urge him to abandon the girl that they may save themselves, but he refuses with scorn. They are overtaken in the mountains and a desperate hand-to-hand struggle ensues. Victory inclines to the Christians until just at the decisive moment a rescuing party of Moslems arrives and drives back the pursuers. But it is all too late, for Alile has fallen, bleeding from seven wounds. As his eyes fix in death Helen kneels by his side, and, declaring that she cannot go back to her father and will not live among the Turks without Alile, she draws a dagger and stabs herself to the heart and falls dead across the body of her lover.

"Halile's Grave" tells of a slain Moslem chieftain whose eternal sleep is troubled by his victorious Christian enemy, who comes constantly to exult over the grave and upbraid the corpse below. A cuckoo, the messenger from the shadow-land, brings the news to the dead man's comrade, who goes into the far mountains and watching by the lonely mound through a stormy winter night, surprises the revengeful enemy, and, after a stoutly contested combat with sword and spear, overpowers and slays him by the aid of a vila or protecting spirit of the forest.

The poems are given in the Croatian or Slavonian original, with a German metrical translation, and an extended introduction and notes containing much valuable information on the history, customs, and folklore of the region.

JAMES MOONEY.

THE BURMAN, HIS LIFE AND NOTIONS, by Shway Yoe (Macmillan & Co., 1896), is the second edition of a work originally issued in 1882. The compliment of a second edition is fully

deserved, and small wonder, for the book is the product of the knowledge of the native, systematized by a European training and illumined at times by a quaint humor which seems to be the product of the contact of the two civilizations. Of the contents of the book it is impossible to speak. The life of the Burman, with everything that the word implies, is really told. No custom or detail is considered too trivial or escapes observation. As a result we have a mine of information for the folklorist, the student of institutions, of religious ceremonies—indeed, of the entire field of anthropology. CYRUS ADLER.

Folk-lore, von Karl Knortz (Evansville, Indiana). Mit dem Anhang Amerikanische Kinderreime, Dresden, 1896. 8vo, 87 pp.

This essay on some points in folklore is an extension of a lecture delivered by Mr Knortz in the high school at Evansville, Indiana. It is divided into three chapters and followed by an appendix containing 100 children's rhymes. The author gives some examples of folklore from different parts of the world and points out the rich opportunities of collecting folklore in the United States, owing to the large number of races and nationalities residing there. He names especially the "negroes, voodoo, and creoles." He finds America and the English language singularly poor in lullabies; he says the following is believed to be the first of American origin:

> "Rock-a-by baby upon the tree top,
> When the wind blows the cradle will rock;
> When the bough breaks the cradle will fall,
> Down comes the baby, cradle, and all."

When the first pilgrims landed in New England they saw Indian squaws hang their pappooses to boughs of trees moved by the wind, and a young English woman, struck by this, composed the verses just cited.

The author narrates the history of Mrs Elizabeth Goose, of Boston, whose "Melodies," published in 1719, have formed for 175 years the delight of American children.

In the third chapter the author discusses the following superstition and shows other beliefs associated with saliva: "When one meets a white horse and spits into his own hand, he will

obtain his wish." Mr Knortz does not, however, refer to Captain Bourke's "Scatalogic Rites" on the saliva question.

The author relates that the cider-loving Pennsylvania Dutch of Cambria county, Pennsylvania, designate tomatoes as "Methodists" because they both like a great deal of water.

The rhymes in the appendix are from New York and Indiana and include a few vulgar, several political (of recent origin), and a number of senseless squibs, most of which do not deserve perpetuation in printers' ink. The author believes the rhymes are printed for the first time, but he is evidently unacquainted with Bolton's "Counting-out Rhymes of Children" (London, 1888), in which many of them are found. He makes no attempt to trace their origin nor to classify them. The appendix, in short, is disappointing, concluding, as it does, a rather desultory writing on folklore. H. Carrington Bolton.

NOTES AND NEWS

Zapotec Language.—A Spanish-Zapotec dictionary of some 222 folio pages has been published by the Junta Columbina of Mexico. The Junta obtained the manuscript from President Diaz, who transferred it to this scientific body for publication. It is estimated that the work contains about ten thousand Spanish terms, in double columns, while the Zapotec vocables are more numerous. A dictionary containing the same Zapotec terms first, followed by the Spanish, has not yet been brought to light. The original manuscript of the Spanish-Zapotec, which dates from about the middle of the eighteenth century, is a huge quarto volume, bound in parchment, and, like the printed work, is in double-column form. It has neither title nor preface, and there is nothing in it to indicate the author's name, though on its back appears "Diccionario sapoteco del Balle." It is evidently a clean copy of an earlier manuscript. The orthography of the Spanish terms is by no means a model of correctness. The dialect differs not inconsiderably from that of Cordoba's vocabulary. The full title is "Vocabulario Castellano-Zapoteco. Publicado por la Junta Columbina de Mexico con motivo de la celebracion del Cuarto Centenario del Descubrimiento de America. Mexico: Oficina Tipografica de la Secretaría de Fomento, 1893."

The Zapotec Indians, who speak this language in several forms of dialect, occupy a large portion of the state of Oajaca, southern Mexico. They number some 260,000, about as many Indians as there are within the limits of the United States. They are an intellectual and peaceable nation, but in ancient times were warlike in character. The ruins of Mitla and other remains of monumental splendor are within their domain.

ALBERT S. GATSCHET.

SOUTHERN EXTENSION OF PREHISTORIC TUSAYAN.—One collection of Tusayan gentes called the Water-house people claim that their ancestors came from a country far to the south of the present Hopi pueblos. The old men have legends that the home of their ancestors was in southern Arizona, and claim that their ancient migration from the ancestral dwelling-place was through some of the passes in the mountains which separate the sources of the tributaries of the Gila and the Little Colorado. They distinctively say that one of their halting places in this northward migration to their present home was near Winslow, Arizona, where they tarried several generations and built large pueblos. To one of these they give the name Homolobi, and point out as its ruins a series of mounds about a half mile from the abandoned Mormon town Sunset, on the right bank of the Little Colorado, three miles north of Winslow.

So circumstantial are the Hopi legends bearing on this point that Dr J. Walter Fewkes, of the Bureau of American Ethnology, assisted by Dr Walter Hough, began in June of the present year an extensive excavation of the ruin of Homolobi to collect archeological data bearing on the legend. This work is still in progress, but the results thus far corroborate the claims of the Hopi traditionists, leaving no doubt that some of the ancestors of the present Hopi formerly lived near Winslow, 80 miles south of Walpi. A rich collection of ancient objects, numbering over six hundred specimens, has already been taken from the mounds of Homolobi. These are distinctly Hopi in their character and consist in part of beautiful ceramic objects adorned with symbols identical with those of Sikyatki and Awatobi, two of the best known prehistoric ruins near the Hopi villages. The collections already gathered are on their way to the Smithsonian Institution.

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ABORIGINES OF JAPAN.—Ever since we have possessed any definite knowledge of Japan the country has been occupied by two aboriginal races—the Aino or Ainu, in the northern part of the islands, the other, difficult to define, in the south. When the earliest mikado, who is a semi-mythic personage, ruled in Japan he resided in Kiu-shiu, the southernmost of the Japanese islands, and the enemies of his people are called Nauyadne Hitzo or "Long-legs," and Jaso-Aakeru or the "Eight wild tribes." The southern race, over which this mikado was ruling, was probably identical with the people settled on Shantong and Shing-King, who are of small stature, dark-complexioned, and ugly. By these characteristics they are readily distinguished from the Chinese and Mandshu people.

The founder of the Japanese dynasty, Jimma Tennos, came, like the first conquerors of Japan, from an unknown country. To throw light on this subject Dr Edkins has compared the Japanese numerals with those of the languages spoken in other parts of Asia. Many numerals and other terms are like those of the upper Amur; others resemble those in use between Tibet and the upper Lena river, as well as some Magyar terms, which would bring the Japanese language nearer the Ural-Altaic stock. A migration from the Siberian plains to Japan could have occurred only in connection with the great wave or flood of the Hunnic nations, which was moving in the direction toward Pekin and ended about 200 B. C. These northern barbarians, called Tanjen in eastern China, held at that time Manchuria and all of northern China. Tangun, founder of the Korean state, sprung from one of the Tanjen tribes and became prominent about 300 B. C., but in the earliest periods Korea was intimately associated with Japan and often had its rulers in common with those of that country. Korean civilization, derived from China, was in the fourth century A. D. introduced into the Japanese islands.

The chroniclers of Japan mention two irruptions of dark-complexioned foreigners from southern lands. Bands of dark Malays arrived from the island of Formosa and the mainland opposite, and it is surmised that they were reinforced from Cambodia and the Philippine islands. The Malayan language, which they brought to the insular kingdom, is still traceable in a large number of terms, and when the Chinese immigrants joined them the

literary dialect of China came there also. The colloquial dialect of the high-caste families of Japan is understood with difficulty by the lower classes, and the Japanese tongue possesses three different series of numerals.

The coalescence of the different races within Japanese limits has been an imperfect one. Nippon, the mainland, harbors only a few settlements of the Ainu, but the medley race to which they gave origin still shows the heavy beard, which is so extraordinary a characteristic of the Ainu. Beards are thick also in southern Japan, but are thinner in the central portions. Other marks of Ainu blood may be found in the dark complexion, the beast-like features, wild rolling eyes, small stature of the Cossack type, and an abnormal greed for salt.

To trace the Ainu type in Japan is less difficult than to find people typifying the race of the southern aborigines. Nevertheless there is in southern Japan a people with bronze complexion, deep-set eyes, flat face, with high cheek-bones, flat nose, and scanty, irregular beard, and hair also of irregular growth.

The offspring of the Siberian or Tartar race are large-bodied, measuring about 1.65 meters; their features are regular, even beautiful; they have brown eyes, smooth hair, high foreheads, and dolichocephalic skulls; their deportment is quiet and dignified. In the north of Nippon the complexion is much lighter, and, indeed, is often ruddy. Two-thirds of the intellectual classes, including the nobility, are composed of this race

The progeny engendered by the Malay race is easier to distinguish in Japan than that of other races, though there are various subdivisions of this type. The Malays are small-bodied throughout; their legs are short and their skulls brachycephalic; they are impassionate, vivacious, with lurking, insidious look; hair rich and showing a curious, dark bluish hue; beard abundant and curly; temperament sanguine. One of the Malay subspecies reminds us of the Semitic race, another of the southern Europeans, and a third of the Suaheli on the east coast of Africa.

A striking characteristic of the first among these subspecies is the Semitic nose and the facial expression, reminding one of rabbis rather than of bedouins. Faces of this kind we meet among the best classes of Japan, even among the daimios, whereas the Malay type is found only among the lowest of the population. The second subspecies is not unlike the southern Europeans, for many men with the fiery looks and well-formed

cheeks appear like Spaniards or Greeks; their hair is curly and their complexion light brown, but the slanting eyes prove an Asiatic origin. The Kuli or laborer class comes nearest to the Suaheli negro, for the hair is woolly, the skull thick, the lips are heavy, and the motions of the mouth are accompanied by the indescribable grinning expression of the negro.

A racial connection between Formosa and the coast of Malabar and a possible origin of the negro or black race from the Dekhan has often been suggested, but not proved. Missionary Halbert has attempted to reduce Korean to radices of Dravidian languages.

But there are still other foreign elements in the Japanese population due to Korean and to Chinese immigration. During the period from the fourth to the seventh century of our era there were much travel and commerce between the two countries, and many artists, writers, and students, as well as traders and mechanics, left Korea to settle in the "Land of the Sunrise." The narrow and oval faces and spare beard found among the higher classes of the Japanese testify to this origin. The Chinese element in the population is supposed to form a tenth of the whole, though others make it a third, and this element is due to very ancient immigration. When the Han dynasty reigned, a Chinese prince settled in Kiu-shiu with a large retinue, and a legendary race, the Seki-manzi or "Stone-men" once came and resided in the same portion of Japan. The remoteness of these arrivals may be judged from the fact that the Chinese type is preserved intact, although in rare instances, but has suffered alterations through intermixture with Malay and Tartaric elements.—*Correspondence of Dr Albrecht Wirth, translated by A. S. Gatschet.*

Redbones of South Carolina.—Mr McDonald Furman, of Ramsey, South Carolina, who has given considerable attention to the Indian remnants of that state, has recently published in the *Sumter Item* an interesting account of the "Redbones" of Sumter county, South Carolina, a peculiar people, evidently of mixed Indian origin and probably akin to the Croatans and Melungeons of North Carolina and Tennessee. Although there is a percentage of negro blood among them, it seems that none of their ancestors were ever slaves, and their predominant characteristics are more Indian than anything else. They usually

intermarry among themselves. One of their most common family names is Goins. The writer of this note formerly knew two brothers of this name in Indiana, who, although associating by necessity with negroes, always insisted that they were not of that race or of slave ancestry. They had the physical appearance of half-blood Indians, with a courtly politeness which Mr Furman particularly notes as characteristic of the Redbones.

JAMES MOONEY.

MARRIAGE CUSTOMS OF THE SHANS.—Marriage celebrations among the Shans are rather unpretentious affairs. The ceremony varies from the simple arrangement of taking each other's word for it to feasts lasting several days among wealthy people; but in these cases the actual ceremony is a minor feature in the proceedings. The usual form among western Shans is for the couple to eat rice together out of the same dish in the presence of their relatives and the village elders. The bridegroom then declares that he marries the lady and will support her. More ceremony is observed among the Lu. The hands of the bride and bridegroom are tied together with a piece of string after they have eaten together, and an old man pronounces them duly married. The Hköns throw rice balls at each other and the couple during the ceremony. The newly married couple then go to their house, and split betelnuts are distributed among the relatives of the bride, who give money as a return present. Divorce is readily obtainable, but, except among young people of low rank, is comparatively rare. A man can have more than one wife if he can afford it. In case of divorce, the property is divided according to the laws of Menu, and the applicant for the divorce, when the desire is not mutual, or the person through whose fault the divorce is applied for, always loses considerably in the division.—*Popular Science Monthly.*

THE THIRTEENTH ANNUAL REPORT of the Bureau of Ethnology, just published, is of unusual interest. The accompanying papers are: Prehistoric Textile Art of Eastern United States, by W. H. Holmes; Stone Art, by Gerard Fowke; Aboriginal Remains in Verde Valley, Arizona, by Cosmos Mindeleff; Omaha Dwellings, Furniture, and Implements, by J. Owen Dorsey; Casa Grande Ruin, by Cosmos Mindeleff, and Outlines of Zuñi Creation Myths, by F. H. Cushing. As usual, the report is handsomely illustrated.

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